fed cattle knows, an animal "will go off his feed" occasionally, and will not thrive.

* It will be observed that the steers fed on the corn ensilage and meal ration gained an average of 33 lb. each more than those on the ration of hay, roots and meal, during the 20 weeks.

† During the last month of the testing period, steers No. 3 and 4, on corn ensilage and meal, gained in weight much faster than the others; and when the experiment was finished, they were in more attractive condition for handling and selling

‡ The steers on hay, roots and meal cost 19.23 cents per head, per day, or nearly 19¼ cents, the cost of the steers fed on the corn ensilage and meal was 11.90: or 13¼ cents against less than 12 cents per day; and the steers on the ensilage gained thirty three pounds each more in the same time.

This authentic experiment should be sufficient alone to convince the most sceptical of the advantages of the system.

On the question of the cultivation of Indian corn, he thus proceds:—A farmer buys, you may say, from his fields the raw material he gives his animals. There is no plant that can be grown on farms in Canada to-day that will furnish these constituents,—albuminoids, fat and carbo-hydrates,—for the feeding of animals as cheaply as the corn plant.

In hay, oats, peas, barley and wheat, you can obtain the same constituents, but they cost so much higher that the man who feeds these things, gets a less profit than the man who feeds them from corn stalks. I will illustrate that statement: the major part of the animals' food is carbo hydrates which keep it warm in our cold climate; these are found most palatable and digestible in sugar, gum and starch The corn stalk has the faculty of appropriating these from the air, when exposed to sunlight and grown in a field where the plants have room.

While near Montreal, last autumn, I saw fields of corn, where the men had wantonly thrown away two and a half bushels of seed to the acre: perhaps they were benevolently inclined towards Mr. Ewing, or other seedsmen

Where the corn stalk has not room enough, the green coloring matter is less active, and does not take in the carbon for the gum, starch and sugar. The corn stalk serves the farmer in proportion as he gives it a chance.

Perhaps one of the most important subjects treated was winter dairying, as this system would revolutionise the whole course of the farm operations, and give profit at a time when previously there had been nothing but output.

One other object of the feeding of ensilage has been overlooked, and it is this:—by feeding cows with ensilage it is possible to have winter dairying in our cold climate; and that means an income from our cows the whole year round; it means the possibility of feeding milking cows with not more than 6 lbs of meal per day In feeding eighteen cows in groups of three, I do not find any gain from feeding over 9 lbs. of meal per head per day; but I find farmers round Montreal, feeding twelve, fifteen and sixteen pounds per head per day, an extra cost of 8 cents per day, with no more milk returns. As soon as we feed over eight pounds of meal per day, we make the milk richer in color but no richer in constituents; thus you see with ensilage you can get more value in product with less cost per day.

One more point: by winter dairying it is possible to extend our trade in swine, and in this climate, with the best conditions for the growing and curing of fine bacon, we could send to England as much bacon as cheese I see a large possibility of a bacon trade in the North-West, which has the best climate for growing animals and curing meats. If the people of Quebec do not take it up, the people of Manitoba will, and will market the grain in the form of concentrated products and get the best profit for themselves.

In winter dairying, it is possible to raise little pigs during the winter, and these raised on skim milk and butter milk, can be marketed to advantage at 6 and 8 months old. No matter how you look at it, the growing of corn and the feeding of ensilage will enlarge a farmer's output and multiply his profits. Five acres of corn made into ensilage will keep fifteen cows in splendid condition, so far as fodder is needed, all the winter.

The small farmer, the man who has been neglected, the man who says: "The big farmer can keep stock and make money, but I cannot," can so enlarge his output through feeding corn ensilage, as to have on a small farm a larger profit that the man who grows hay and feeds it.

The growth of corn and the making of ensilage, is capable of the best service to the farmer; and every farmer's prosperity is a measure of prosperity to every good citizen of the country.

Read carefully on feeding dry hay only—Prof. Robertson: I never feed hay, if I can help it, without roots. I never do it at all if I can help it, but, if I do, I must have roots or some succulent food with the hay. I have the best results from ensilage alone, without hay at all, but with about five pounds of straw (1).

Note by Mr. Barnard:—(1) On hay farms, hay may be fed with great profit, with or without roots or ensilage, by preparing it in advance Wetting it so that it reabsorbs the proportion of water it contained as grass, and softening it with hot water, at least 12 hours in advance, is an excellent practice, especially where milk is aimed at. The hay ration when thus prepared will replace a considerable proportion of the meal ration.

Clover and other crops for ensilage by Mr. Barnard—This was a very learned and intelligent discussion, on the fact that there are many other crops which can be ensiled to great advantage—that clover is much richer in nitrogen than corn, and even that the rough grass of a farm may thus be turned into palatable and nutritious forage by fermentation and subsequent total exclusion of the air.

To illustrate this Mr Barnard exhibited a sample of ensilage made from the tough Mount Royal grass which cattle refused to eat in the shape of hay but on which the ponies and cattle were thriving in its present condition. Read Mr. Barnard's admirable address carefully and you will not be long without a silo. You will find it on page 48 of the pamphlet.

Causes of failure (by Prof. Robertson) too true. Let those wear the cap whom it will fit and ponder the consequence to themselves.

The success of farmers, which means for them good times, comes mainly from good crops; good crops depend mainly upon good cultivation, the use of good seed, the exercise of good management and the prevalence of good weather.

In nine seasons out of ten in Canada, the weather is quite favorable for the production of good crops; the other factors are well within the control of the intelligent farmer. The want of knowledge about his own business and the want of interest in the methods whereby he can improve his productions, are perhaps among the main difficulties that afflict agriculture at the present time.

Turn the farm into a manufactory, says the professor in another place.

In the development of agriculture, farmers should be discouraged from marketing primitive products, which take from the soil large stores of its fertility. They should be encouraged and advised to sell animals and their products which will enable them to realise larger incomes without the exhaustion of their soil. Farmers have an impression that there are much larger profits in manufacturing than in agriculture. I think the farmer is right in this impression; but instead of advising him to complain because this state of things exists, I would advise him to become a manufacturer himself and thus obtain his share of these larger profits. The primitive products such as hay, corn stalks, pease, barley and oats, can be manufactured into refined and concentrated products, such as beef, butter, cheese, pork, mutton, horses and manure.

Mr. McPherson, in his address, made the following encouraging if startling statement:—I would like to give you what I have produced in the last four years, on a small farm of 130 acres I have in Ontario. I strove to find out that plant which would give us the greatest result, and that market which would give me the greatest profit. By experiments I found that the corn crop was the most profitable to grow, and that the animal products were the best to sell, because they gave the greatest amount of money from the least amount of capital and labor. In applying that principle, I started with twenty-five head of cattle on a 130 acre farm that was run out, that had not paid a profit of one per cent on forty dollars an acre for years past. By adopting the corn crop and burying my capital through concentrated food, making the animal pay for it, in four years I have changed the capacity of the field from being able to feed twenty-five cattle to feed one hundred and eighty head.

The grass product sold yearly then was six to eight hundred dollars per annum, and left no net profit. Last year, the 4th year, the inventory of value produced in the summer of 1891 was over four thousand five hundred dollars. I have not yet obtained the maximum I expect. I think it will take me three or four years longer, when I really believe by carrying on these operations in these lines through the corn crop and through the animal, I shall get a net return of fifteen dollars per acre after paying all expenses of capital and labor. What does that mean in regard to the value of the land? If you have land that will give you fifteen dollars per acre net profit, it makes the value of the land $150 to $200. Estimate in four years a change from forty dollars to one hundred dollars an acre, what does that mean on one hundred and thirty acres? sixty dollars an acre of increased value on capital account. Besides this, it means a change from the loss my farm was giving me four years ago, to a profit of about $1,000 a year. I have not got the figures, but on the first of May I expect to show a dividend, a balance sheet of one thousand dollars from the one hundred and thirty acres.

What we want is to sow crops in rotation which will make the greatest use of the material that is in the soil, that will give us the greatest product to convert into cash, and will give us the opportunity of turning the most capital in the land, increasing the value of the land and increasing the profits from working the land. These are questions, gentlemen, which should stir us up to enquiry, stir us up into action, and put knowledge into practice.

For, it is not enough to come here and find out certain points of knowledge; it is not enough to read books and find out the theory of farming; it is only enough when that knowledge is put into every day practice on our farms, and then we shall be able to change the vocation of farming from being unprofitable to one of profit, and also increase the capital-producing value of the land

The pamphlet concludes with able and concise articles as to the construction of a silo (with diagram), the rational feeding of milch-cows with their rations and results obtained under various conditions, all tabulated so that he who runs may read.

Comparative value of various goods and grains and milk returns, showing the net profits realised, and a remarkable statement from Sir John B. Lawes, of England, showing that his method of feeding, which was so successful, exactly corresponds with the ration theory of the eminent French scientist, Jules Crevat.

Let me add in conclusion, that the pamphlet is replete with useful and thoroughly practical information, and it is a farmer's own fault, if he has reasonably good land, if he cannot make a success with putting his intelligence and physical powers into action and taking advantage of the knowledge so freely disseminated by means of such associations and the report of their proceedings. It will never do to say farming cannot be made to pay, after such evidence. Read, mark, learn and digest the advice given, then assiduously put it into practice and never doubt the fact that farming here will pay and generously too according to the amount of attention, judgment and labor applied.

GEORGE MOORE.

List and addresses of the members of the Council of Agriculture appointed by order in Council approved by the Lieutenant-Governor on the 17th of November 1892.

The Honorable A. C. P. R. Landry, Senator, Beauport.

The Honorable John McIntosh, Agriculturist, (1) Waterville

The Honorable M. G Joly de Lotbinière, Agronome, Lotbinière.

The Honorable F. X O. Methot, Legislative, Councillor St Pierre les Becquets.

Le Rev. M. T. Montminy, Cure of St. Georges, Beauce.

Benjamin Beauchamp, M. P. P. St. Hermas

Milton McDonald, M. P. P Acton Vale

Joseph Girard, M. P P. St. Gédéon,

Joseph de la Broquerie Tache. Notary, Quebec

I J. A. Marsan, Professor of the School of Agriculture, L'Assomption.

Robert Ness, Freeholder, Howick.

Timothée Brodeur, Freeholder, St. Hugues.

Charles D. Tylee, Freeholder, Ste Thérèse de Blainville.

Henry S. Foster, Agriculturist, Knowlton.

Le Rev. M. E. Dauth, Curé of St. Léonard.

Dr. Wilfrid Grignon, Freeholder, Ste. Adèle.

Basile Lamarre, Freeholder, Longueuil.

Le Rev. L O. Tremblay, Director of the School of Agriculture, Ste. Anne Lapocatière.

A A. Ayer, Exporter of butter and cheese, Montreal.

Ora P. Patten, Freeholder and Agent, Montreal.

Andrew J. Dawes, Agriculturist, Lachine.

(1) *Agronome:* There is no corresponding term in English: "Gentleman-farmer" is the nearest. The literal meaning of the word is "Ruler of the land".